



Solid State Devices, Inc.

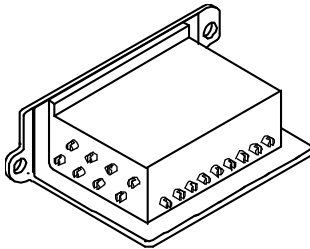
14701 Firestone Blvd * La Mirada, Ca 90638
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Designer's Data Sheet

Part Number/Ordering Information 1/

SDA345

- Screening 2/
- = Not Screened
- TX = TX Level
- TXV = TXV
- S = S Level



SDA345

**ULTRA FAST RECOVERY
 HIGH VOLTAGE ASSEMBLY**

Up To 18KV @ 250mA

125KHz Operating Frequency

FEATURES:

- Designed For Use With High Voltage Switching Power Supplies
- Discretes and Assemblies Screened to TX, TXV, or S Level
- High Reverse Transient Energy Capabilities
- Void Free, Hermetically Sealed, Metallurgically Bonded Discretes
- Single Junction Discretes Provide Superior Thermal Properties Than Designs Using Multi-junction Discretes
- Isolated Aluminum Heat Sink with Special Epoxy Encapsulation Provides Superior Power Dissipation
- All Internal Devices are Matched & Selected
- Unique Construction Techniques Guarantee 100% Corona Free Operation
- Consult Factory for Higher Voltages and Currents and Alternate Bridge Configurations

**MAXIMUM RATINGS
 PER LEG**

**ELECTRICAL CHARACTERISTICS
 PER LEG**

Rating ^{1/}	Symbol	Value	Unit	Characteristic ^{1/}	Symbol	Value	Unit
Peak Repetitive Reverse Voltage and DC Blocking Voltage	VRM(rep) Vr	3,000	Volts	Max. Full Cycle Forward Voltage Drop, Averaged Over Full Cycle ^{6/}	VF (AV)	2.85	Vdc
RMS Reverse Voltage	Vr	2,100	Volts	Max. Instantaneous Forward Voltage Drop ^{2/}	VF	5.7	Vdc
Half Wave Rectified Forward Current Averaged Over Full Cycle ^{2/}	Io	1	Amps	Max. Full Cycle Leakage Current Averaged Over Full Cycle ^{8/}	IR (AV)	100	µAdc
Peak Repetitive Forward Current ^{3/}	IFM(rep)	6	Amps	Max. Reverse Leakage Current ^{9/}	IR	5	µAdc
Peak Surge Current ^{4/}	IFM(surge)	25	Amps	Max. Junction Capacitance ^{10/}	CJ	4	pf
Operating & Storage Temperature	TJ, Tstg	-55 to +125	°C				
Reverse Recovery Time ^{5/}	trr	60	ns				

NOTES:

1/ Unless Otherwise Specified, All Electrical Characteristics @25°C.

2/ Resistive Load, 50Hz, Sine Wave, TC=25°C.

3/ TC=55°C, 8.3ms Pulse, Allow Junction to Reach Equilibrium Between Pulses.

4/ TC=55°C, 8.3ms Pulse, Superimposed on Rated Current at Rated Voltage.

5/ Recovery Conditions: I_F = 0.5 Amp, I_R = 1.0 Amp rec. to .25 Amp, tested on each individual diode before assembly.

6/ IO (MAX), 60Hz, Square Wave, TC = 55°C.

7/ IF = 1 Adc, TC = 25°C, 300 µs Pulse.

8/ Rated VR, 60Hz, Square Wave, TC = 100°C.

9/ Rated VR, TC = 25°C.

10/ VR = 100V, TC = 25°C.

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: RA0072A

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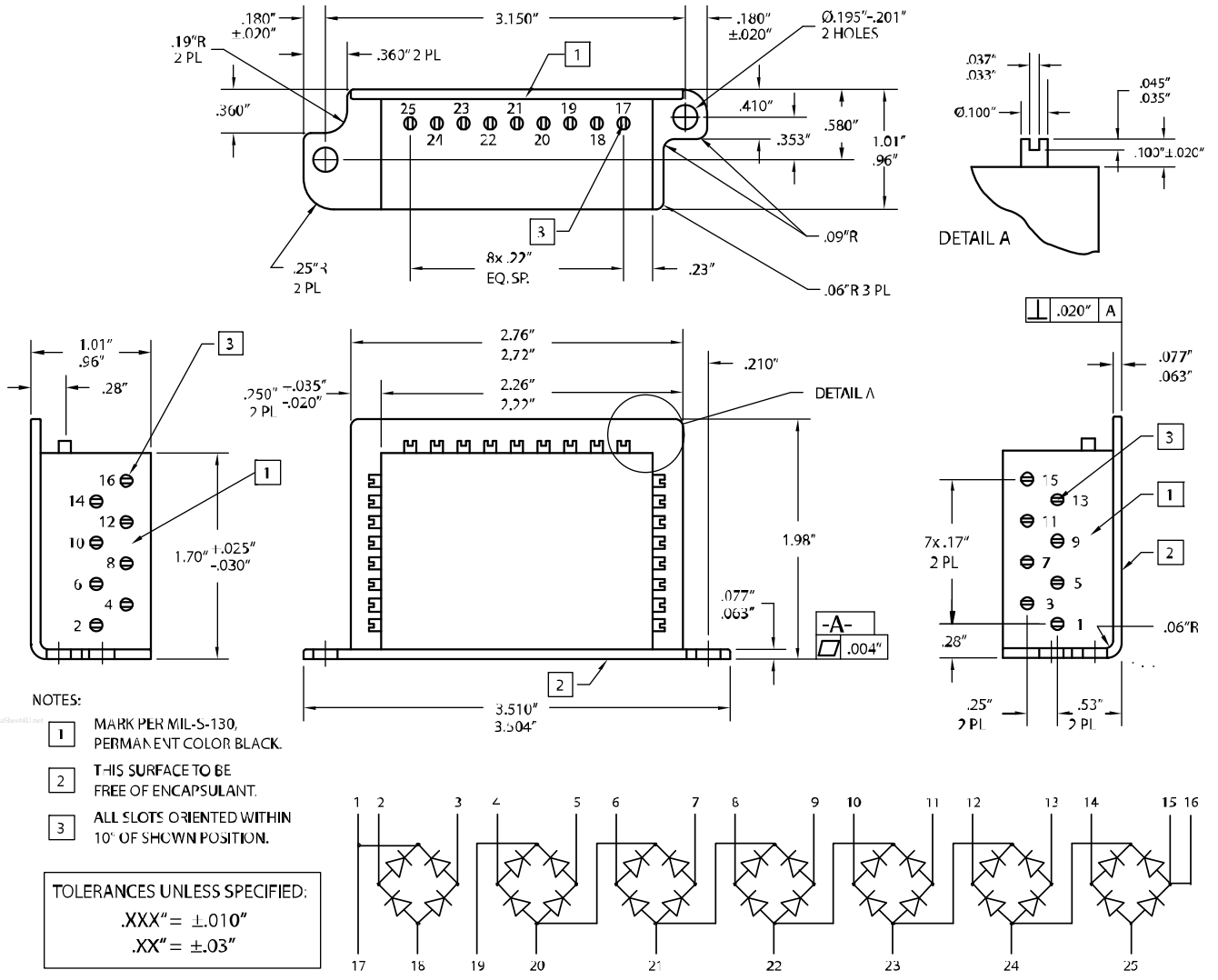


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SDA345

SDA345 OUTLINE and SCHEMATIC DRAWING:



NOTES:

- 1 MARK PER MIL-S-130, PERMANENT COLOR BLACK.
- 2 THIS SURFACE TO BE FREE OF ENCAPSULANT.
- 3 ALL SLOTS ORIENTED WITHIN 10° OF SHOWN POSITION.

TOLERANCES UNLESS SPECIFIED:
 .XXX" = $\pm .010"$
 .XX" = $\pm .03"$

*For information on curves, contact the Factory Representative for Engineering Assistance.